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09/207,282 12/08/98 CONBOY

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EXAMINER

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ART UNIT

PAPER NUMBER

3651

DATE MAILED:

10/04/00

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.  
09/207,282

Applicant(s)  
Conboy et al.

Examiner  
Michael E. Butler

Group Art Unit  
3651



☒ Responsive to communication(s) filed on Dec 8, 1998

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claim

☒ Claim(s) 1-18 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-18 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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**DETAILED ACTION*****Drawings***

1. New drawings are required upon allowance because the drawings were declared informal by the applicant.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-18 are rejected under 35 U. S. C. 112. Applicant has repeated conjoined elements using “or” creating vague and indefinite language as to the claim scope. If alternative embodiments (narrow coverage) is sought, consider markush groupings. If a broad range is sought consider language such as “at least two”. The claims have been otherwise examiner presuming Boolean “OR” for examination on the merits.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States
- (c) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.
- (f) he did not himself invent the subject matter sought to be patented.

5. Claims 1-8 and 10-17 are rejected under 35 U.S.C. 102(e & f) as being anticipated by Conboy et al. '566. Conboy et al. '566 discloses:

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(re: cl 1) An automated material handling system, comprising:

a plurality of material carriers including a plurality of empty carriers classified into two or more carrier types;

one or more stock areas each including a plurality of bins for storing material carriers, wherein each stock area is associated with one or more thresholds for each carrier type;

a control system coupled to a first one of the stock areas for computing an empty percentage for the first stock area for each carrier type, the empty percentage for a particular carrier type being the percentage of bins of the first one stock area which contain empty carriers of the particular type; and

a transportation system responsive to the control system for selectively moving an empty carrier of a certain carrier type between a staging area and the first stock area based on a comparison of the empty percentage for the certain carrier type to the one or more thresholds of the first stock area for the certain carrier type (c 12 L 67);

(re: cl 2) the material carriers include semiconductor wafer carriers (c 13 L 1-3);

(re: cl 3) the one or more thresholds for the empty carrier of the certain carrier type include a maximum value and wherein the transportation system moves an empty carrier of the certain carrier type from the first stock area to the staging area if the maximum value is exceeded by the empty percentage of the certain carrier type (c 13 L9-14);

(re: cl 4) The automated material handling system as recited in claim 1, wherein the one or more thresholds for the empty carrier of the certain carrier type include a minimum value and wherein the transportation system moves an empty carrier of the certain carrier

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type to the first stock area from the staging area if the empty percentage of the certain carrier type falls below the minimum value (c 13 L 14-19);

(re: cl 5) the staging area includes a second one of the stock areas (c 13 L 20-23);

(re: cl 6) the control system calculates a system move rate as the number of the plurality of material carriers moved by said transportation system in a predetermined time period and the transportation system moves the empty carrier of the certain carrier type between the staging area and the first stock area only if the system move rate is less than a predetermined value (c 13 L 35-39);

(re: cl 7) each empty carrier type is associated with a priority and wherein the transportation system moves the empty carrier of the certain carrier type between the first stock areas and the staging area based on the priority of the certain carrier type and the priorities of other carrier types (c 13 L 40-44);

(re: cl 8) the control system calculates an empty move rate for the certain carrier type as the number of empty carriers of the certain carrier type moved by the transportation system in a predetermined time period and the transportation system moves the empty carrier of the certain carrier type between the staging area and the first stock area only if the empty move rate for the certain carrier type is less than a predetermined value (c 13 L 29-31);

(re: cl 10) A method for managing empty material carriers in an automated material handling system including a plurality of material carriers including empty material carriers and one or more stock areas each including bins for storing material carriers, the method comprising: classifying at least the empty material carriers into two or more carrier types; (c6 L 56-67; c 12 L 67);

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associating each of the stock areas with one or more thresholds for each carrier type (c9 L 3-11);

computing an empty percentage for each empty carrier type for a first one of the stock areas, the empty percentage for a particular empty carrier type being the percentage of bins of the first one stock area which contain empty carriers of the particular type (c 8 L 40-52); and

selectively moving an empty carrier of a certain carrier type between a staging area and the first stock area based on a comparison of the empty percentage for the certain carrier type for the first stock area to the one or more thresholds of the first stock area for the certain carrier type (c 14 L 39-42);

(re: cl 11) the material carriers include semiconductor wafer carriers (c 14 L 43-44 );

(re: cl 12) the one or more thresholds for the empty carrier of the certain carrier type include a maximum value and wherein selectively moving the empty carrier of the certain carrier type from the first stock area to the staging area includes moving the empty carrier of the certain carrier type if the maximum value is exceeded by the empty percentage of the certain carrier type (c 13 L9-14);

(re: cl 13) the one or more thresholds for the empty carrier of the certain carrier type include a minimum value and wherein selectively moving the empty carrier of the certain carrier type to the first stock area from the staging area includes moving the empty carrier of the certain carrier type if the empty percentage of the certain carrier type falls below the minimum value (c 13 L 14-19);

(re: cl 14) the staging area includes a second one of the stock (c 13 L 20-23);

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(re: cl 15) calculating a system move rate as the number of the plurality of material carriers moved in the system in a predetermined time period, wherein selectively moving the empty carrier of the certain carrier type between the staging area and the first stock area includes moving the empty carrier of the certain carrier type only if the system move rate is less than a predetermined value (c 13 L 35-39);

(re: cl 16) associating each empty carrier type with a priority, wherein selectively moving the empty carrier of the certain carrier type between the first stock areas and the staging area includes moving the empty carrier of the certain carrier type based on the priority of the certain carrier type and the priorities of other carrier types (c 13 L 40-44);

(re: cl 17) calculating an empty move rate for the certain carrier type as the number of empty carriers of the certain carrier type moved in the system in a predetermined time period, wherein selectively moving the empty carrier of the certain carrier type between the staging area and the first stock area including moving the empty carrier of the certain carrier type only if the empty move rate for the certain carrier type is less than a predetermined value (c 13 L 29-31).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conboy et al. '566. Conboy et al. '566 discloses the elements previously disclosed

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but does not disclose that the empty move rates are global. The examiner takes official notice that the use of global parameters are well known. It would have been obvious for Conboy et al. '566 to use global empty move rates because global parameters are easy to transmit between diverse control modules facilitating modular control programs.

### ***Double Patenting***

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 1, 2, 3, 4, 5, 6, 7, 8, and 9 are rejected under the judicially created doctrine of double patenting over claims 1, 2, 4, 5, 6, 10, 11, 8, and 8 respectively of U. S. Patent No. 5,838,566 to Conboy et al. so as to prevent the unjustified or improper timewise



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extension of the "right to exclude" granted by a patent and the claims, if allowed, would improperly subject applicants to harassment from multiple assignees. It would have been obvious to extend the teachings of Conboy et al. '566 to a system having a plurality of stocking areas because a carrier system with a plurality of stocking areas presents an opportunity to move parts between several locations comprising plural stages of processing, creating more flexibility than a system having merely one stocking area. The use of global control parameters are well known and it would have been obvious It would have been obvious for Conboy et al. '566 to modify claim 8 to use global empty move rates because global parameters are easy to transmit between diverse control modules facilitating modular control programs.

### *Conclusion*

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The examiner in particular calls to the attention to the applicant the patent to Iwasaki et al. filed eight months prior to the instant but two years subsequent to the Conboy et al. 566 reference. Iwasaki et al. discloses: An automated material handling system, comprising:  
a plurality of material carriers including a plurality of empty carvers classified into two or more carrier types; one or more stock areas each including a plurality of bins for storing material carriers a control system coupled to a first one of the stock areas for computing an empty percentage for the first stock area for each carrier type, the empty percentage for a particular carrier type being the percentage of bins of the first one stock area which contain empty carriers of the particular type; and a transportation system responsive to the control system for selectively moving an empty carrier of a certain carrier type

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between a staging area and the first stock area based on a comparison of the empty percentage for the certain carrier type to the one or more thresholds of the first stock area for the certain carrier type. If applicant overcomes the Conboy et al. '566 102/103 rejections via identification of inventors, a 131 affidavit addressing Iwasaki et al. may prove prudent.


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Exmr. Michael E. Butler whose telephone number is (703) 308-8344.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Ellis, can be reached on (703) 308-2560. The fax number for the Group is (703) 305-7687.



Michael E. Butler

Examiner



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